

*Application of Farber et al, 09/612,598*

49. (Twice Amended) In a distributed hosting framework operative in a computer network in which users of client machines connect to an origin server, wherein the framework includes: (A) a set of repeater servers, distinct from the origin server, for hosting at least some of the embedded objects of web pages that are normally hosted by the origin server; (B) a repeater server selector mechanism constructed and adapted to identify, for a particular client machine, an appropriate repeater server from the set of repeater servers; and (C) a routine for modifying at least one embedded object URL of a web page to resolve to a server in the set of repeater servers instead of to the origin server; a method of serving a page and an associated page object, wherein the page is stored on the origin server and copies of the page object are stored on the set of repeater servers, the method comprising:

- (a) modifying a URL for the page object to designate a repeater server instead of the origin server;
- (b) serving the page from the origin server with the modified URL;
- (c) responsive to a browser query to resolve to the designated repeater server, identifying a given one of the set of repeater servers from which the object may be retrieved; and
- (d) returning to the browser an address of the identified repeater server to enable the browser to attempt to retrieve the object from that server.

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53. (Twice Amended) In a distributed hosting framework operative in a computer network in which users of client machines connect to an origin server, wherein the framework includes: (A) a set of repeater servers, distinct from the origin server, for hosting at least some of the embedded objects of web pages that are normally hosted by the origin server; (B) a repeater server selector mechanism constructed and adapted to identify, for a particular client machine, an appropriate repeater server from the set of repeater servers; and (C) a routine for modifying at least one embedded object URL of a web page to resolve to a server in the set of repeater servers instead of to the origin server; a content delivery service, comprising:

replicating a set of page objects across the set of repeater servers, wherein the set of repeater servers are managed by a domain other than an origin server domain;

for a given page normally served from the origin server domain, modifying at least some embedded objects of the page so that requests for the page objects resolve to the repeater domain instead of the origin server domain;

responsive to a request for the given page received at the origin server domain, serving the given page from the origin server domain; and

serving at least one embedded object of the given page from a given server in the repeater server domain instead of from the origin server domain.

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54 (Twice Amended) The content delivery service as described in claim 53 wherein the serving comprises:

for each embedded object, identifying one or more servers from which the embedded object may be retrieved.

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55. (Twice Amended) The service as described in claim 54 wherein an identified server is selected from a set of repeater servers based on data identifying a requesting user's location.

57. (Twice Amended) In a distributed hosting framework operative in a computer network in which users of client machines connect to an origin server, wherein the framework includes: (A) a network of repeater servers, distinct from the origin server, for hosting at least some of the embedded objects of web pages that are normally hosted by the origin server; (B) a repeater server selector mechanism constructed and adapted to identify, for a particular client machine, an appropriate repeater server from the network of repeater servers; and (C) a routine for modifying at least one embedded object URL of a web page to resolve to a server in the repeater server network instead of to the origin server; a method for Internet content delivery, comprising:

at the origin server, modifying at least one embedded object URL of a page to designate the repeater server network instead of a server normally used to retrieve the embedded object;

responsive to a request for the page issued from a client machine, serving the page with the modified embedded object URL to the client machine from the origin server;

responsive to a request for the embedded object, resolving the modified URL to an address of a server in the repeater server network that is not overloaded; and

attempting to serve the embedded object to the client from the server in the repeater server network.

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60. (Twice Amended) The method as described in claim 57 further comprising:  
identifying a subset of repeater servers that may be available to serve the embedded  
object based on a location of the client machine and data identifying current costs between a  
group containing the requesting client machine and a set of repeater servers; and  
identifying the repeater server from the subset of repeater servers.

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61. (Twice Amended) In a distributed hosting framework operative in a computer  
network in which users of client machines connect to an origin server, wherein the  
framework includes: (A) a network of repeater servers, distinct from the origin server, for  
hosting at least some of the embedded objects of web pages that are normally hosted by the  
origin server; (B) a repeater server selector mechanism constructed and adapted to identify,  
for a particular client machine, an appropriate repeater server from the set of repeater servers;  
and (C) a routine for modifying at least one embedded object URL of a web page to resolve  
to a server in the set of repeater servers instead of to the origin server; a content delivery  
method, comprising:

distributing a set of page objects across the network of repeater servers, wherein the  
network of repeater servers are managed by a domain other than an origin server domain;

for a given page normally served from the origin server domain, modifying at least some  
of the embedded objects of the page to designate a repeater server domain so that requests for  
the objects resolve to the repeater server domain instead of the origin server domain; and

in response to a client request for an embedded object of the page:

returning to the client an address of a given one of the repeater servers within  
the repeater domain that is likely to host the embedded object and that is not  
overloaded.

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148 62. (Twice Amended) In a distributed hosting framework operative in a computer network in which users of client machines connect to an origin server, wherein the framework includes: (A) a set of repeater servers, distinct from the origin server, and in a second domain distinct from an origin server domain for hosting at least some of the embedded objects of web pages that are normally hosted by the origin server; (B) a repeater server selector mechanism constructed and adapted to identify, for a particular client machine, an appropriate repeater server from the set of repeater servers; and (C) a routine for modifying at least one embedded object URL of a web page to resolve to a server in the set of repeater servers instead of to the origin server; a content delivery method, comprising:

causing an embedded object in a page to resolve to the second domain other than an origin server domain by rewriting a URL supplied by the origin server to generate a different resource locator which designates a repeater server in the second domain instead of the origin server;

serving the page with the different resource locator from the origin server;

resolving the different resource locator to identify a repeater server in the second domain; and

serving the embedded object from the identified repeater server.

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64. (Amended) In a distributed hosting framework operative in a computer network in which users of client machines connect to an origin server, wherein the framework includes:

(A) a set of repeater servers, distinct from the origin server, and in a second domain distinct from an origin server domain for hosting at least some of the embedded objects of web pages that are normally hosted by the origin server; (B) a repeater server selector mechanism constructed and adapted to identify, for a particular client machine, an appropriate repeater server from the set of repeater servers; and (C) a routine for modifying at least one embedded object URL of a web page to resolve to a server in the set of repeater servers instead of the origin server; an Internet content delivery method, comprising:

for an embedded object in a page, where the embedded object is referenced by a uniform resource locator (URL) which references the origin server domain, causing the URL to resolve to the second domain;

serving the page from the origin server; and

serving the embedded object from a server in the second domain.

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65. (Amended) In a distributed hosting framework operative in a computer network in which users of client machines connect to an origin server, wherein the framework includes:

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(A) a network of repeater servers, distinct from the origin server, for hosting at least some of the embedded objects of web pages that are normally hosted by the origin server; (B) a repeater server selector mechanism constructed and adapted to identify, for a particular client machine, an appropriate repeater server from the set of repeater servers; and (C) a routine for modifying at least one embedded object URL of a web page to resolve to a server in the set of repeater servers instead of to the origin server; a content delivery service, comprising:

replicating a set of page objects across the network of repeater servers;

for a given page normally served from the origin server, modifying at least one embedded object of the page so that requests for the page object resolve to one of the repeater servers instead of to the origin server;

responsive to a request for the given page received at the origin server, serving the given page from the origin server; and

serving at least one embedded object of the given page from a repeater server instead of from the origin server.

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69. (Amended) In a distributed hosting framework operative in a computer network in which users of client machines connect to an origin server, wherein the framework includes:

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(A) a wide area network of repeater servers, distinct from the origin server, for hosting at least some of the embedded objects of web pages that are normally hosted by the origin server; (B) a repeater server selector mechanism constructed and adapted to identify, for a particular client machine, an appropriate repeater server from the set of repeater servers; and (C) a routine for modifying at least one embedded object URL of a web page to resolve to a server in the set of repeater servers instead of to the origin server; a content delivery service, comprising:

replicating a set of page objects across the wide area network of repeater servers;

for a given page normally served from the origin server, modifying at least one embedded object of the page so that requests for the page objects resolve to one of the repeater servers instead of to the origin server;

in response to a request for the given page received at the origin server, causing the given page to be served from the origin server; and

serving at least one embedded object of the given page from a repeater server instead of from the origin server.